

## A Comparative Study on the Level of Creativity of Secondary School Students in Urban and Rural In Malaysia

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### Abstract:

Creativity is the ability to create, produce something new or modify it into something new. Creativity skills are increasingly emphasized as evidenced by the Malaysia Education Blueprint (MEB) 2013 - 2025 to produce creative and innovative students. This study aims to assess the level of creativity among students from the B40 income group in urban and rural secondary schools in Malaysia. The research instrument used is a set of questionnaires modified based on the Torrance Test of Creative Thinking (TTCT) namely Verbal Test and Figural Test. TTCT is measured based on 4 measurement indices namely Authenticity, Fluency, Flexibility, and Descriptive. The respondents involved in this study consisted of 2400 secondary school students who were selected based on the characteristics appropriate to the focus of the research, namely students from the B40 income group, secondary school students, and 16 years old. The data obtained were analyzed using IBM Statistical Packages for Social Sciences (SPSS) version 21. To calculate the percentage and use descriptive statistics in percentage explain the differences of creativity variance. The results of the research found that the percentage of creativity of students in the city is higher where 14% for the very creative category and 25% for the creative category compared to 2% for the very creative category and 4% for the creative category from school students from rural areas. The researcher hopes that the findings from this research will be able to help stakeholders in planning the social system, education, employment, economy, and improve Malaysia's position in the index of Global Creativity and Global Creative Class to be comparable to other countries in the Asia Pacific in accordance with the Malaysia Education Blueprint (MEB) 2013 -2025.

**Keywords:** Creativity; B40; Test of creative Thinking; Secondary School Student; Malaysia.

### INTRODUCTION

Creative thinking skills are the ability to digest and produce original ideas. New ideas will be generated through inspiration or a combination of existing ideas. Creative thinking is very close to human activities and lifestyles. This thinking depends on the stimuli received in daily life. Consciously or not, creative thinking styles occur daily unnoticed.

In today's technological era, teenagers are the easiest individuals influenced by technological developments. This sophisticated technology is the result of the creative thinking of the creators to facilitate daily work. Creativity is not only evaluated in terms of creation as stated by Calvin W. Taylor [See S. Najihah: 2017] in Calvin's theory of creativity, it encompasses various aspects of shaping such creative thinking. Adolescents are an asset to a country, therefore it is very important to assess the level

of creativity of the heirs of this country. This is intended as a step to prepare them and the country to weather the currents of modernity.

In the current pandemic era, the lower class (B40) in the country such as small traders, students, and graduates will receive the economic impact following the coronavirus pandemic (Covid-19). Member of the Board of Trustees of the Malaysian Institute of Economic Research (MIER), Dr. Muhammed Abdul Khalid (Sinar Harian 2020), based on data from February to June 2020, the total unemployment percentage increased and the unemployment rate was recorded at 4.9 percent. He added that the effects of the pandemic will widen the gap between rich and poor with the percentage of B40 will increase while T20 will remain because it is not as affected as the lower class. According to him, the poverty rate will also increase as job opportunities are getting smaller and added to the number of them being unemployed and losing their jobs.

However, with creative minds, many of the students took the initiative by venturing into online transactions such as food delivery and groceries to successfully meet the economic challenges and reopen high employment opportunities and to some extent help the economy. According to the Managing Director of Food Panda Sayantan Daspangkalan, foodpanda riders also increased by 169 percent from 13,000 riders in January 2020 to 35,000 riders at the end of last year. According to him, the high demand for services continues to increase compared to normal days, especially during peak hours (Berita Harian 2020).

### **SIGNIFICANCE OF STUDY**

Accurate, valid, and reliable new data related to the variation in the level of creativity among students from the B4 income group in urban and rural secondary schools can be used as a guide in resolving issues related to creativity.

New discoveries related to students' creative and innovative thinking are directly related to a student's ability to think critically, communicate in class, and the ability to solve complex problems.

New approaches that are directly related to aspects of creativity have the potential to be applied as co-curriculum or training modules by the Ministry of Education Malaysia and the Ministry of Youth and Sports Malaysia in designing a more organized and targeted education system for students from the B40 income group in secondary schools throughout the country. New data and findings related to the creative and innovative thinking of high potential students are used by the Ministry of Housing and Local Government and the Economic Planning Unit in ensuring the social, economic, and other systems related to students from this B40 income group are on track.

### **LITERATURE REVIEW**

#### a. Creativity

The word creativity comes from the Latin word "creare" which means "make", while from the Greek word "creare" means "fulfill". In general, creativity is the ability or capability to invent and produce something new and original. Creativity requires a high level of imagination, exploration, and the ability to build something new against

something old and existing. Creativity involves critical and analytical thinking skills to create and produce new ideas that are unique yet interesting. It also involves the ability to think practically that can translate ideas into the application form.

#### b. Below 40

According to the Department of Statistics Malaysia (2020), the Bottom 40 (B40) income group refers to households with an income of RM 4850 per month and below representing 40 % of the low-income group in Malaysia. The B40 concept is described in the Rancangan Malaysia yang kesepuluh (RMK-10) and Rancangan Malaysia ke sebelas (RMK-11). The definition of households according to income groups used in Malaysia is divided into three, namely the group of households with the highest 20% income (T20), the middle 40% (M40), and the lowest 40% (B40).

Income Classification by Household			
Household Group		Median Income (RM)	Income Range (RM)
<b>B40</b>	B1	1,929	Less than 2,500
	B2	2,786	2,500 - 3,169
	B3	3,556	3,170 - 3,969
	B4	4,387	3,970 - 4,849
<b>M40</b>	M1	5,336	4,850 - 5,879
	M2	6,471	5,880 - 7,099
	M3	7,828	7,110 - 8,699
	M4	9,695	8,700 - 10,959
<b>T20</b>	T1	12,586	10,960 - 15,039
	T2	19,781	15,039 or more

\*Source: Household Income and Basic Amenities Survey Report 2019, Department of Statistics Malaysia

Figure 1.0 Classification of Households

#### c. Types of Schools in Malaysia

According to the Ministry of Education Malaysia (2019), secondary school refers to lower secondary education and upper secondary education. Lower secondary education is for students aged 13 to 15 years (Form One to Form Three) and is given exposure to various fields of knowledge by using the national language as the main medium of instruction. Upper secondary education is provided to students aged 16 to 17 years (Form Four to Form Five) leading to the streams of literature, science, religion, technique, vocational and skills, including preparing students to further their studies to higher education or employment.

#### d. Urban and Rural Areas

According to the Department of Statistics Malaysia 2018, the definition of the urban area is "Gazetted area and saturation area build area bordering it and a combination of these two areas with a population of 10,000 or more during the 2018 Population and Housing Census", while other areas with less population of 10,000 people are classified as rural areas.

## **PROBLEM STATEMENT**

In line with the Malaysian Education Blueprint (2013-2025) which emphasizes creative thinking skills, in particular, the Ministry of Education Malaysia emphasizes the mastery of various cognitive skills including reasoning and critical thinking, creativity, and innovation. One of the problems of the education system in secondary schools today is related

to the formation of a person's personality foundation that will enable him to socialize successfully in a dynamic society, develop and choose life and career on his own and work hard to use his creative potential efficiently. (Palei, 2014). The best way to implement it is to start at the school level again by nurturing a culture of creativity, invention, and innovation.

Malaysia has the potential to produce creative and innovative people, this is in line with the National Education Philosophy and its application in compulsory subjects and subject curriculum. Educational institutions are the most important place to nurture students' creative talents and abilities. The development of education in the 21st century has seen an emphasis on critical thinking skills, creative thinking as well as innovation. The development of technology also affects the educational process at all levels to be in line with the currents of modernization. Discussing the education of the B40 group, based on sources from the Department of Statistics Malaysia (2019) the unemployment rate of B40 income families reached 31 percent (%) at the Diploma level and 22% for first-degree holders. It is a worrying number because, without a job or a decent income, it is difficult for these graduates to help their families out of poverty. Therefore, a study needs to be conducted to identify to change this situation.

## **OBJECTIVE OF STUDY**

The main objective of this research is to identify the actual level of creativity of students in the B40 income group in schools throughout Malaysia.

## **RESEARCH METHODOLOGY**

According to Marzuki (2012), the methodology paves the way for appropriate and appropriate research methods as well as describes the methods carried out along with the research. For this study, the survey research methodology was chosen in accordance with the purpose and to facilitate the research.

### **a. Research Design**

The study design chosen by the researchers was a combination of quantitative and qualitative. The survey study was conducted based on references on matters related to sampling, measurement, and data analysis.

### **b. Research instrument**

The instrument used was a set of creativity test questions based on a test conducted by Marzuki Ibrahim (2020)

Methods	Research Instrument
Qualitative	Figural and Verbal Creativity Test Sets
Quantitative	Creativity Test Results

Table 1. Study Instrument

### c. Sampling

For this research, the researcher has chosen non -probability sampling (non - random) with purposive sampling characteristics. Purposeful sampling or purposive sampling/judgment sampling refers to the sampling procedure that is a group of subjects with certain characteristics only selected as study respondents based on the knowledge and specific purpose of the researcher's research. This means that not all other studies in its population were selected by the researcher as respondents.

### d. Selection of Respondents

For this research, the researcher has taken a total sample of 2400 respondents from the B40 income group from states throughout Malaysia. Selection of respondents based on characteristics such as high school students, from families with income B40 and aged 16 years or form 4 only to facilitate the process of data management and comparative analysis. The selection of the age of the respondents was also made based on guidelines and conditions from the Information Management Division & Education Policy Planning and Research Division, Ministry of Education Malaysia (MOE).

### e. School Selection And Zoning

The selection of schools and zoning is based on the results of discussions with the Ministry of Education Malaysia (MOE)

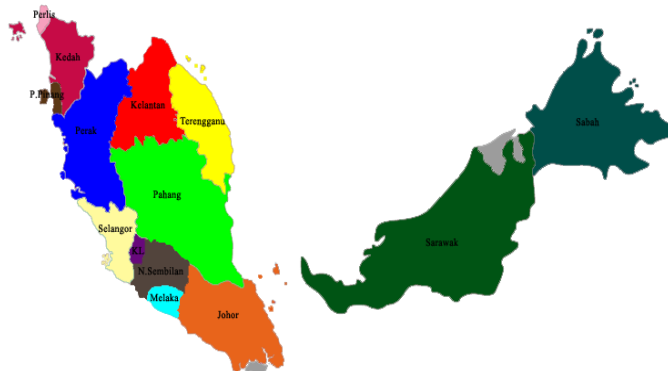


Figure 2. Map of the States of Malaysia

The school selection procedure is based on secondary schools that have a total of more than 500 students to facilitate the selection of students from the B40 group in the school. After obtaining the list of selected schools, the list is then sent to each State Education Department (SED)

to obtain approval for the selection of schools and then apply for permission to conduct field research activities. Each application to the NRD is attached with a letter of permission to conduct field research activities from the Education Policy Planning and Research Division of the Ministry of Education Malaysia. This study uses an analytical method that focuses on descriptive analysis in the form of tables and graphs. Cluster analysis was also used to identify differences between urban and rural areas. The data collection process experienced some difficulties in terms of safety aspects due to the spread of Covid 19. This difficulty also forced this research to take a long time to conduct field studies. with a strict Standard Operating Procedure (SOP) from the ministry to enter each school coupled with the number of students attending primary schools.

#### f. Creativity Test

Since creativity is directly related to celebrating a different and practical idea, then the creativity test is felt to be the most appropriate template for this purpose. The Torrance Test of Creative Thinking (TTCT) by E.Paul Torrance is the most widely used creativity test in the world. TTCT is designed not only to measure a person's creativity but also to assist a person in further developing their creative abilities (see: KIM, 2017; Torrance, 1970, 1974). For this research, researchers have used both Verbal and Figural test methods as proposed by Torrance. However, these two tests will take a long time if they involve a large number of respondents. To overcome this problem, the suggestion from Torrance that a simpler test could be performed has been given due consideration by the researchers. Taking this suggestion, then in this research, researchers will adapt a simpler and time-saving figural test that is figural test that was once conducted by Marzuki Ibrahim (2020).

The production of figural and verbal test questions is to study the cognitive domain of the respondents in accordance with the 'creation' feature in Bloom's Taxonomy aims to study the intellectual level of the respondents towards creative thinking based on the characteristics of Originality, Generation, Planning, and Production. Bloom's taxonomy is an educational objective used by educators to measure and improve students' high-level thinking skills in learning (Nursyahirah 2018). Students will be assessed in terms of creativity that is innovative. For the figural test, students are given task to produce objects from the templates provided where each template is different, while for the verbal test, students are tested by solving problems based on self-rescue situations. Data from the creativity test were analyzed using descriptive statistical methods using the method of comparison between very creative to non -creative. To complete the analysis process, the evaluator will use a 5 -point scale. Assessors will evaluate all drawing results from this Creativity Test based on four (4) indices as recommended by Yahyaawal et. al. (2021) namely:

Originality: Generating different, unusual, and unique ideas.

1. Fluency: Open-minded, high imagination, ability to generate many ideas.
2. Flexibility: Diversify approaches to generating ideas.
3. Elaboration: Able to develop ideas from one level to a higher, emphasis on detail.

To evaluate the results from the distribution of this survey, in accordance with the study conducted by Marzuki Ibrahim (2020) researchers have selected a total of 5 evaluators based on the characteristics of involvement in the field of art (academics), who have been directly involved in research or creativity -related activities and being a jury/evaluator/judge in creativity competitions.

## RESULTS AND DISCUSSIONS

The respondents of this study consisted of 2400 students from 66 schools. The selection of respondents is based on purposive sampling to meet the objectives of the study to obtain the desired information. The findings of this study are a preliminary step to answer research questions related to the level of creativity of students from the B40 income group in Peninsular Malaysia. In order to facilitate the process of descriptive data analysis, the authors have given specific focus to the items that have been listed under the four main indices of Figural Test, namely: Authenticity, Fluency, Flexibility, and Descriptive.

Number	Total Student
Male	1052
Female	1348
Total	2400

Table 2. Number of Respondents for the Study by Gender

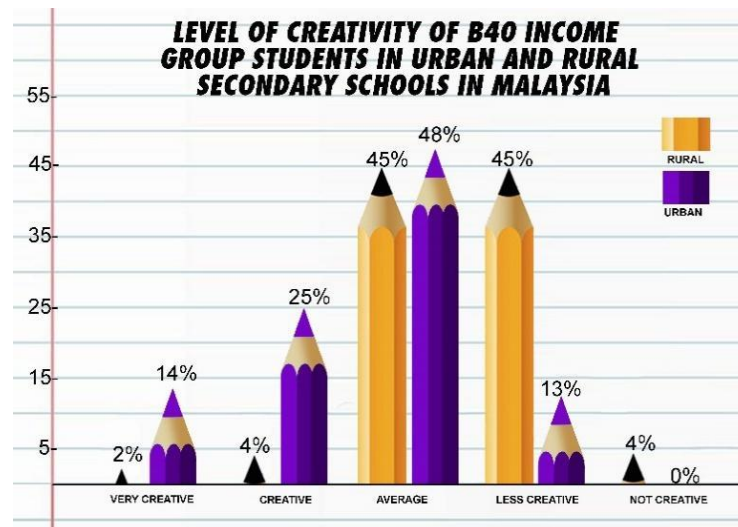


Chart 1. Level of Creativity of B40 Income Group Students in Urban and Rural Secondary Schools in Malaysia

Chart 1 shows the comparative results from the creativity test that was conducted on respondents from Malaysia. Referring to respondents from the very creative group the percentage who reached the very creative level was very low. If evaluated in- depth the percentage value for the respondents of the group is very creative for outside below

10%. While the respondents in the creative group, the average creativity is 13.6 % clearly showing the percentage of creativity is still low. For the respondents in the fair group, it showed a difference that was not so significant when compared to the respondents in the less creative and not creative group. This reflects the level of creativity of urban students from Malaysia is more towards the fair position compared to rural areas who are more towards the fair and less creative. The conclusion is that the total percentage of student creativity for the very creative and creative categories is low.

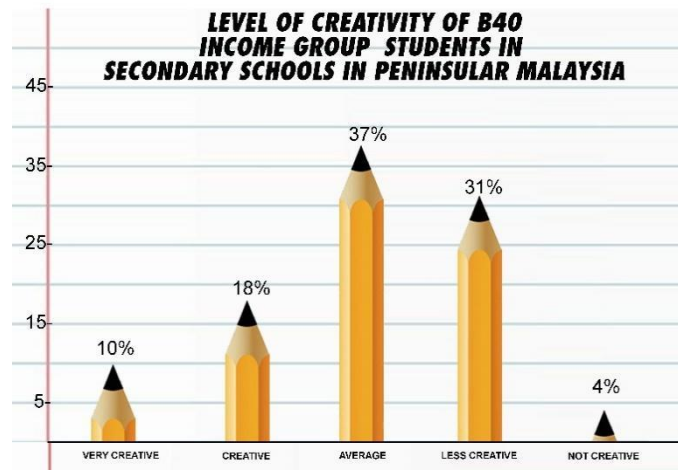


Chart 2. Level of Creativity of B40 Income Group Students in Secondary Schools in Malaysia

Chart 2 explains the findings for the creativity test for secondary school students in Malaysia. Judging from the very creative and creative categories clearly showed a low percentage. Although the percentage of very creative is higher than not creative which is a difference of only 6% but if you look at the percentage for less creative with the very creative category is a very significant difference which is 31% for less creative and 10% for very creative clearly shows the true level of creativity secondary school students in Malaysia. In conclusion, the level of creativity of students is in the fair category.

#### DATA ANALYSIS

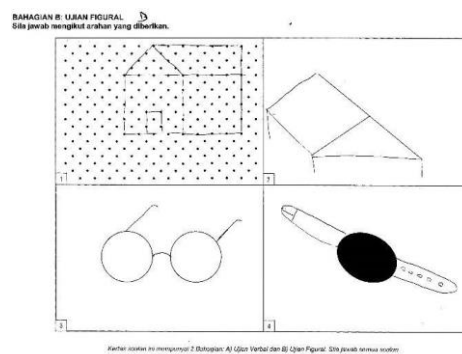
The results of a study conducted on students from the B40 income group in urban and rural schools in Malaysia found that significant differences were obtained from the creativity test. Based on the researcher's observation, the results of

the creativity test on the verbal figural test part mainly found that the variation of students' answers from the middle zone is more interesting and unique than the eastern zone. Verbal testing requires students to solve problems based on a given situation and students are asked to explain methods of rescuing themselves from that situation. For the verbal test, students from rural areas were more inclined towards running away from problems rather than solving problems. For students from the city, various ways and methods are described to save themselves from the situation. Based on the researchers' observations from the creativity test on the figural test, they found that respondents from rural areas are more likely to draw objects in their environment such as pencil erasers, desks, and study chairs. This shows that many of them have their



minds confined to the immediate environment only. Some of the factors that influence the difference in the level of creativity between urban and rural-based on the observations of the researchers are the teachers who teach. Teachers who teach in urban areas are mainly composed of various races which to some extent color the school environment with a variety of different learning methods and exposure.

Based on the researchers' observations, one of the factors influencing the high percentage in the moderate and less creative categories of high school students is because students are more inclined towards the same idea or imitate the answers from other students. This is further evidenced by the results of figural tests where almost all students produce objects that are almost the same. It, therefore, affects the value of the element of authenticity in the scoring. Researchers argue that the lack of external exposure is one of the factors that lead to low creativity test results, this is evidenced by



the low assessment of Flexibility and Descriptiveness.

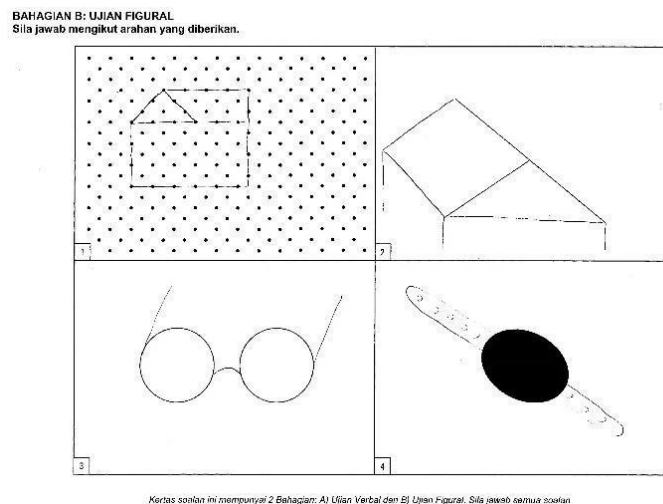


Figure 3. Examples of Creativity Test

Researchers personally think that one of the factors that differentiate the level of creativity between the eastern and central zones is the advancement of information and communications technology (ICT). The advancement of ICT to some extent helps students to think more creatively, this is because students will get more benefits and it

indirectly offers additional aspects to students who will be interested in deepening knowledge using more interactive learning mediums. As stated by Ruhaiza Rusmin (Metro 2016) through ICT, students can generate creativity and innovation, as well as efficiently use technology to access information from various sources in line with global developments based on e-learning and k-economy.

The difference in socio-economic development in urban and rural areas is also the biggest factor in the difference in the level of creativity, this is evident from the results of tests that have been conducted. The states in the central zone are especially rapidly developing by indirectly creating intense competition in survival training the mind for creative thinking. Sharifah Hasidah (2016) states that "If we want to see the state develop in the future then we need to produce a creative, smart and innovative generation. (Borneo Post, August 2016)

The conclusions from this study prove that there is a gap in creativity difference between urban and rural B40 students. This also supports the statement from the Education Development Master Plan 2013-2025 that there is a gap between urban and rural schools and proves the real thing behind Malaysia's position in the Global Innovation Index (GII) 2019.

### **CLOSING**

It is hoped that the findings of this study can to some extent help the MOE which is in the process of improving, updating, or perhaps restructuring the existing curriculum so that it is relevant to current developments. Finally, it is hoped that these findings can also be used to help Malaysia in producing creative thinking and further improve its position to be among the 20 best countries in the world in the Global Creativity Index and Global Creative Class.

### **APPRECIATION**

Researchers expressed their appreciation to the management of the Information Management Division and Education Policy Planning and Research Division, Ministry of Education Malaysia (MOE) Faculty of Innovation Design and Technology Universiti Sultan Zainal Abidin, Terengganu, and the management of the Center for Excellence Management and Research Incubator Universiti Sultan Zainal Abidin for the facilities make a field study. A huge thanks also to each of the management of the State Education Department and the management of the District Education Office for smoothing the process of data collection and creativity testing. Not forgetting also to the school management who conducted this study and special thanks to those who contributed to this project directly or indirectly.

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